

You can use a chlorine bleach solution to disinfect your water system after:

- Well drilling or construction
- Repair work (including replacing the pump)
- The well is flooded, or
- A water test shows bacterial contamination

You will add the bleach directly to the well or spring. Chlorinated water will then travel throughout the plumbing and faucets in the home.

Before You Begin

Make sure you have rubber gloves and eye protection and can keep children and pets away from highly chlorinated water.

Disconnect or remove any water treatment devices, such as activated carbon filters, water softeners or reverse osmosis units. Highly chlorinated water can make them less effective or even damage them.

Draw enough water for household use to last for three to five days or until the chlorine smell goes away. Any of this water used for drinking or washing food should be boiled for one minute. You can also buy or collect water from another source.

Determine how much bleach you need. One gallon of laundry bleach (6-8% chlorine) is needed for every 525 gallons of water. You can use an online calculator to find out how many gallons are in your well at:
healthvermont.gov/water/disinfection.

For overflowing wells and springs, use fast-dissolving 65-70% calcium hypochlorite pellets (3 ounces for every 100 gallons of water or about 2 feet in depth). Pellets are available at pool supply or hardware stores.



Photo: Department of Environmental Conservation

CAUTION: The pellets should contain **ONLY** calcium hypochlorite—**NOT** algicides, chlorine stabilizers/conditioners, acids, or other disinfectants. (These may be acceptable to use in swimming pools, but are not safe for drinking water).

Steps to Disinfect

1. Carefully and slowly pour the bleach down into the well, avoiding the electrical wires.
2. Whenever possible, run the chlorinated water through a garden hose back into the well for an hour so the chlorinated water washes down the inside of the casing.
3. Scrub the sides of a dug well or spring with a clean brush and a chlorine solution (mix one part household laundry bleach to four parts of water). Use rubber gloves and eye protection.
4. Recap the well, then open one faucet at a time throughout the house. Run the water until you smell a strong chlorine smell, then turn the tap off. **CAUTION:** Strong chlorine solutions may damage rubber and polybutylene gaskets and fittings.

5. It takes time for chlorine to disinfect, so it is important to keep the chlorinated water in your system for 12 hours. After 12 hours, connect a hose to a tap or outside faucet and drain the chlorinated water to a safe, outdoor location.

CAUTION: Do not drain highly chlorinated water onto a lawn or garden or into the septic system. A safe area could be a graveled driveway or a brushy area. Keep children and pets away from the discharge, and do not allow the chlorinated water to reach a stream, because it could kill fish. Skin and eyes may be sensitive to strong chlorine solutions. Avoid contact during disinfection.

6. To avoid overstressing your water source, run the water at less than full flow or turn off the tap periodically and allow the source to recover for several hours. Continue flushing until the chlorine smell is gone.

7. **Re-test the water for bacteria** two to three days after the chlorine smell has disappeared. Continue to either boil water or get drinking water from a safe source until test results indicate the absence of bacteria.

More Information

For more information, visit:

healthvermont.gov/water/disinfection.

To watch a video of potential problems with your well and suggested solutions, visit:

healthvermont.gov/water/coliform-bacteria.

If you have additional questions, call the Drinking Water Program at 800-439-8550.

To order test kits, contact the Health Department Laboratory at 800-660-9997.



TIPS

If you do not know the depth of your well, you might find it using the Natural Resources Atlas (<http://anrmaps.vermont.gov/websites/anra5>) or the Well Completion Report Searchable Database (<https://anrweb.vt.gov/DEC/WellDrillerReports/Default.aspx>). Search by your location and well tag number. Or you can ask a local licensed well driller (<https://dec.vermont.gov/water/groundwater/well-drillers>).

If you still don't know: add chlorine to the well, let it run through your plumbing, and then test the concentration in the water coming out of your faucet. You can measure it with a chlorine pool testing kit from your local hardware store. The test strip should show 100 ppm of free chlorine. If it is too low, add more chlorine to the well. You should be able to smell the chlorine when running the faucet.

Remember to use ordinary household bleach without any added chemicals.